US-PAT-NO: 5341436

DOCUMENT-IDENTIFIER: US 5341436 A

TITLE: Nondestructive analysis of dispersion and loading of reinforcing material in a composite material

DATE-ISSUED: August 23, 1994

US-CL-CURRENT: **382/141**, **382/168** , **382/286** , 702/41 , 702/81

APPL-NO: 07/ 973196

DATE FILED: November 6, 1992

PARENT-CASE:

This is a continuation of application Ser. No. 07/606,799 filed Oct. 31, 1990, now abandoned.

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Brief Summary Text - BSTX (9):

Dispersion may also be determined quantitatively. For instance, dispersion may be determined by multiple sampling and ashing of small sections of samples. However, this is a tedious and time-consuming procedure. Also, computed tomography may be used to determine fiber

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DOCUMENT-IDENTIFIER: US 5748775 A
See image for Certificate of Correction

TITLE: Method and apparatus for moving object extraction based on background subtraction

DATE-ISSUED: May 5, 1998

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APPL-NO: 08/ 401972

DATE FILED: March 9, 1995

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	6-037438	March 9, 1994
JP	7-029220	February 17, 1995

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Detailed Description Text - DETX (65):
As the illumination change becomes more abrupt, the variance .sigma.
increases accordingly, and it becomes difficult to distinguish a case of the
illumination change and a case of the cause other than the illumination change
according to the value of the variance .sigma.

alone, as can be seen in the **histogram** 355 for a case of the abrupt illumination change and the **histogram** 352 for a case of the cause other than the illumination change. In order to distinguish these two cases, the maximum value m of the temporal differential df of the intensity value can be used, as this temporal differential df takes a small value for a case of the illumination change and a large value for a case of the passing of the moving object, as can be seen in the **histogram** 365 for a case of the abrupt illumination change and the **histogram** 362 for a case of the case other than the illumination change. In particular, this temporal differential df takes particularly large values at a moment of the entry of the moving **object into the image and at a moment of the exit of the moving object** from the image.

dispersion characteristics, as disclosed in Japanese Patent Application Publication Kokai 63-67551. This Publication discloses a method of evaluating the fiber dispersion characteristics in a fiber-reinforced composite material based on the **histograms** of cross-sectional images produced by X-ray transmission computed tomography. However, this approach uses reconstructive imaging techniques to produce a final image; consequently, it is expensive and is not able to give instantaneous feedback.

Drawing Description Text - DRTX (8):

FIG. 6 is a **histogram** showing the distribution of gray levels in a radioscopic image for both a test bar with good fiber dispersion and a test bar with poor fiber dispersion analyzed with the apparatus of the preferred embodiment of the present invention and described in Example 1.

Detailed Description Text - DETX (53):

The **histogram** of the gray level values of the pixels in the region of interest was generated and plotted for each of the two test bars. As shown in FIG. 6, the distribution of gray levels in the renormalized, digitized electronic image is directly correlated with the quality of dispersion of reinforcing material in the test bars, where a narrow distribution is an indication of good dispersion, as exhibited by test bar 1B.

Detailed Description Text - DETX (59):

Using the computer to make the above measurements automatically, each half of each 4.5".times.0.5".times.0.125" test bar was examined for a total of 10 measurements per lot, giving a total of 70 measurements. In order to provide the data necessary for renormalization, the "black" level and the "white level" were obtained as in Example 1. Next, the measurements were made as follows: Up to 25 of the 35 bars were placed on the X-Y table at a time. After the test bars were placed on the X-Y table and the X-ray source was energized to 42 keV at 87 .mu.A of beam current, the **automatic analysis program was started**. The X-Y table, which was driven by a motor controlled by the computer, was moved to position the next test bar between the X-ray source and the image intensifier, and a renormalized, digitized electronic image was calculated by averaging 100 video frames from the camera and applying the renormalizing formula as in Example 1.

Current US Original Classification - CCOR (1):

382/141

Current US Cross Reference Classification - CCXR (1):

382/168

Current US Cross Reference Classification - CCXR

(2):

382/286